BionX®

USER MANUAL
GUIDE D'UTILISATION
BENUTZERINFORMATION

Welcome

Thank you for choosing BionX™. It is our goal to provide you with the highest quality electric propulsion systems available, and offer you the best possible after sales experience.

This document serves as a supplement to your bicycle user manual. Please read this manual thoroughly, even if you are an experienced cyclist. Should you be unable to find an answer in the manual, please contact your dealer for immediate assistance.

We have always believed that a bike should remain a bike. It is our love of cycling that drives us, and a passion that we continue to share with our customers. We hope you enjoy your new electrically assisted bicycle for many years to come.

If you ever have concerns or questions that your dealer cannot provide answers to, or have comments relating to this user manual, feel free to contact us in Europe at **service.bike.eu@bionxinternational.com**, in North America at **service.bike.na@bionxinternational.com**, and anywhere else in the world at **service.bike@bionxinternational.com**

User Precautions

We want you to have a fun ride, but also a safe one. Carefully read the following information, even if you are an experienced rider. Take the opportunity to familiarize yourself with your BionX electric propulsion system before you take your first trip.

1. BionX recommends that you have your system installed professionally by an authorized dealer.
2. Read all of the enclosed installation and operating instructions from the manufacturer and follow the instructions, if any, prior to its first use.
3. Familiarize yourself with your electric bicycle and the functions of the BionX system in a safe environment before participating in road traffic for the first time.
4. Always wear a helmet when riding an electric bicycle for your own safety. In some jurisdictions, this is the law.
5. Make sure that the tires have the pressure recommended by the manufacturer before riding the bike.
6. Make sure that the brakes are operating properly before riding the bike.
7. Do not use a mobile phone or any other electronic devices while riding an electric bicycle; it is imperative that you pay attention to traffic.
8. If possible, ride in bike lanes and always in the correct direction of traffic.
9. Adhere to all valid traffic regulations.
10. Keep in mind that other traffic participants may underestimate the speed of an electric bicycle.
11. Ride with both hands on the handlebars when riding your electric bicycle.
12. Ride as defensively as possible.

Enjoy your new BionX electric propulsion system!

Your BionX Team

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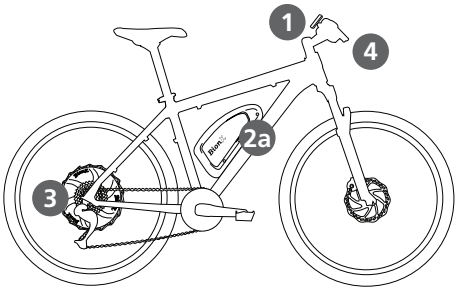
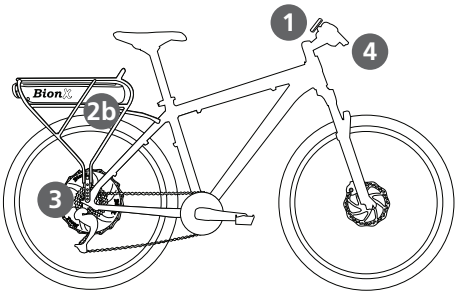
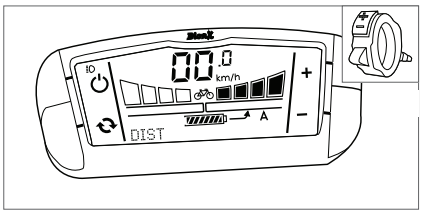
Description of the BionX SL Propulsion System





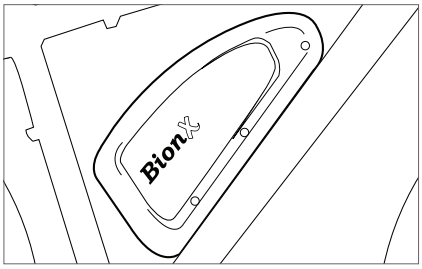


1 G2 Console

- Removable G2 console
- Illuminated LCD display with battery state-of-charge
- 4 Assistance levels
- 4 Generate levels
- Backlight, and bicycle light controls (if applicable)
- Offers cycle computer functions (speed, odometer, clock, average speed, trip distance)

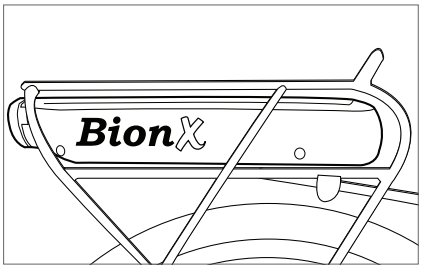
Remote throttle (where applicable)

- Assistance/Generate Toggle
- Variable control throttle lever



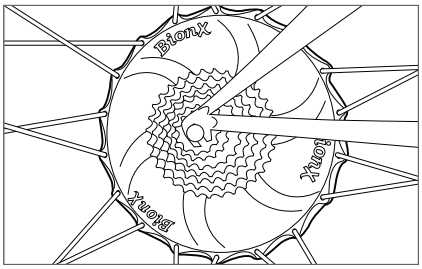
2a 48V Down Tube Battery

- Lithium Ion (Li-Ion)
- Removable, lockable
- TOUCH PORT state-of-charge indicator
- XL – 48V / 8.8Ah / 423Wh
- L – 48V / 6.6Ah / 317Wh (where available)
- DC Output: Default 6V (adjustable from 6V to 12V where applicable). Maximum current: 2amps. Connector: Type Jack 2 .1mm



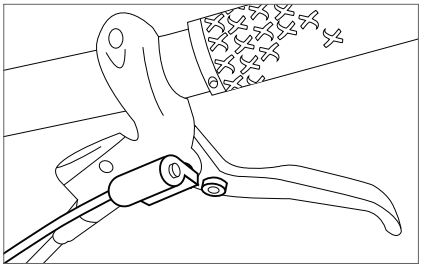
2b 48V Rear Rack Battery

- Lithium Ion (Li-Ion)
- Removable, lockable
- TOUCH PORT state-of-charge indicator
- RR XL - 48V / 8.8Ah / 423Wh
- RR L - 48V / 6.6Ah / 317Wh (where available)
- DC Output: Default 6V (adjustable from 6V to 12V where applicable). Maximum current: 2amps. Connector: Type Jack 2 .1mm



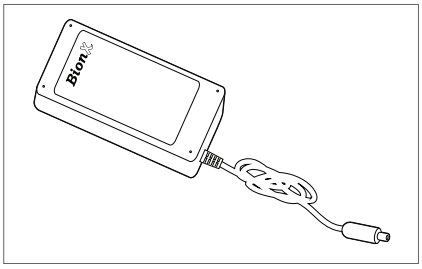
3 SL Motor

- DC rear, high torque (HT) hub motor
- Power – 200W (AU & UK), 250W (EU), 350W (NA)
- Torque – 9Nm/40Nm (6.6/29lb-ft)
- Weight – 3.5kg (7.7lb)
- Brushless, gearless
- Generate mode for energy recuperation
- Integrated torque sensor



4 Brake switch

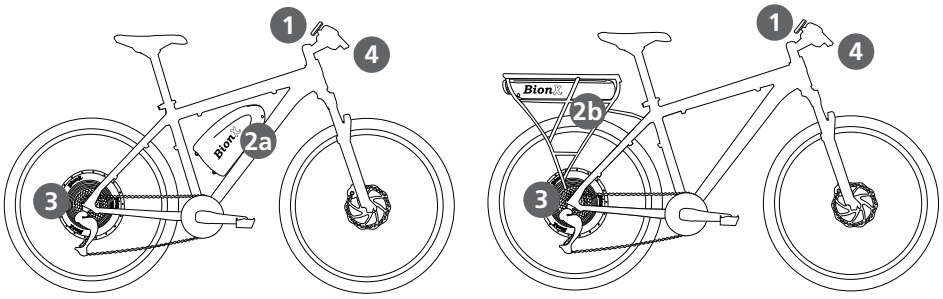
- A surface mounted reed switch and magnet – connected to the BionX console
- Upon brake application, assistance is shut off ("kill switch") and Generate mode is activated

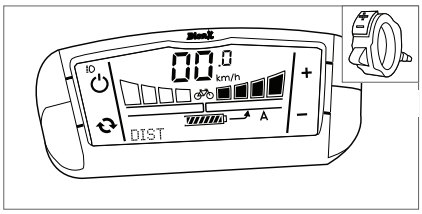


Power Supply

- Power supply to recharge the 48V Li-Ion battery
- Input voltage: 100-240V
- Output voltage: 26V
- Max. charge current: 3.45A
- Output: 90W

Description of the BionX PL Propulsion System



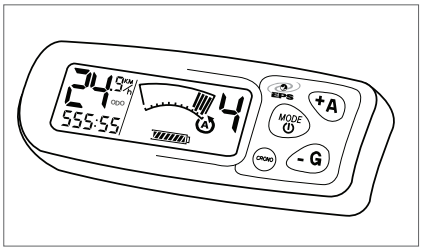


1 G2 Console (systems 2011 to present)

- Removable G2 console
- Illuminated LCD display with battery state-of-charge
- 4 Assistance levels
- 4 Generate levels
- Backlight, and bicycle light controls (if applicable)
- Offers cycle computer functions (speed, odometer, clock, average speed, trip distance)

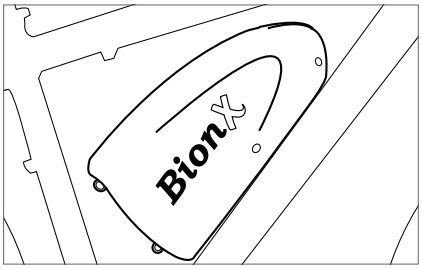
Remote throttle (where applicable)

- Assistance/Generate Toggle
- Variable control throttle lever



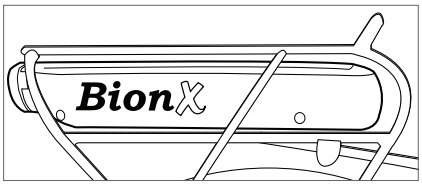
1 G1 Console (systems 2010 and earlier)

- G1 console (optional throttle lever where applicable)
- Illuminated LCD display with battery state-of-charge
- 4 Assistance levels
- 4 Generate levels
- Backlight, and bicycle light controls (if applicable)
- Offers cycle computer functions (speed, odometer, clock, average speed, trip distance)

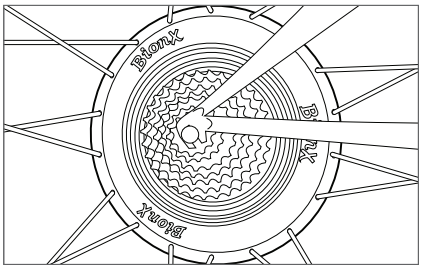


2a 22, 26 or 37V Down Tube Battery

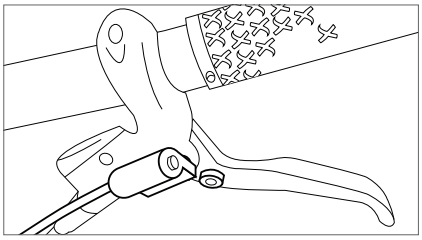
- Lithium Ion (Li-Ion)
- Removable, lockable
- L - 37V / 9.6Ah / 355Wh
- M - 26V / 9.6Ah / 250Wh
- S - 22V / 6.4Ah / 141Wh



2b 37V Rear Rack Battery
- Lithium Ion (Li-Ion)
- Removable, lockable
- RR L - 37V / 9.6Ah / 355Wh
- RR M - 37V / 6.4Ah / 237Wh
- DC Output: Default 6V (adjustable from 6V to 12V where applicable). Maximum current: 2amps. Connector: Type Jack 2 .1mm



3 250, 250HT, 350HT, or 500HS* Motor
- DC rear hub motor
- 250: nom. output 200 (AU & UK) or 250 watt – nom. 7Nm / max. 25Nm (5.2/18.4 lb-ft) torque
- 250HT / 350HT: nom. output 200 (AU & UK), 250 (EU), 350 (NA) watts – nom. 9Nm / max. 40Nm (6.6/29.5lb-ft) torque
- 500: nom. 500 watt – nom. 9Nm / max. 25Nm (6.6/18.4lb-ft) torque
- Weight - 4.7kg (10.4lb)
- Brushless, gearless
- Generate mode for energy recuperation
- Integrated torque sensor



4 Brake switch
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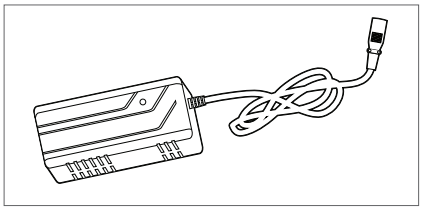
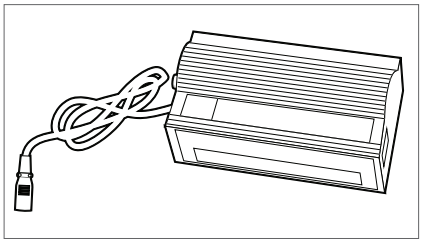
- Upon brake application assistance is shut off ("kill switch") and Generate mode is activated



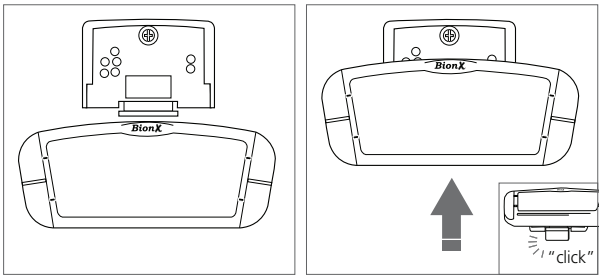
37V Single LED Battery Charger (PL systems 2011 to present)
- To recharge the 37V Li-Ion battery
- Input voltage: 100-240V
- Output voltage: 37V
- Max. charge current: 2A



22V, 26V or 37V Two LED Battery Charger (PL systems 2011 and earlier)
- To recharge the 22V, 26V or 37V Li-Ion battery
- Input voltage: switchable between 115-230V
- Output voltage: 22V, 26V or 37V depending upon model
- Max. charge current: 2A

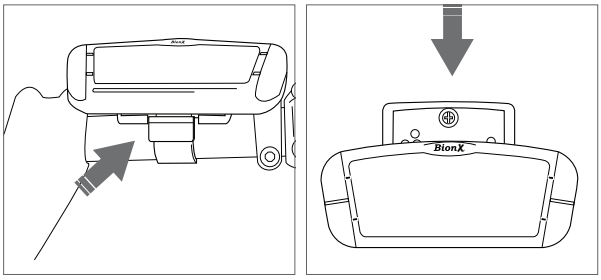
*Note: the 500 watt motor is not legal in all jurisdictions. Check with your local BionX dealer for local legislation and/or availability.

Inserting or Removing the Console



Inserting the console

- Slide the console into the console mount on the handlebar
- Make sure that the console engages securely. When inserted correctly, you will hear a "click"



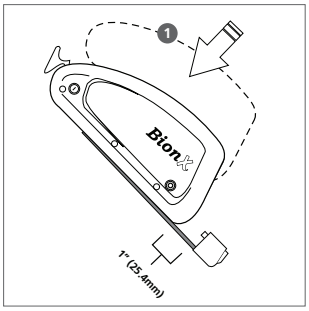
Removing the console

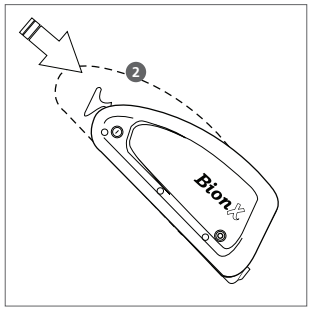
- Release the console by pushing the release lever on the console mount
- Slide the console out of the console mount

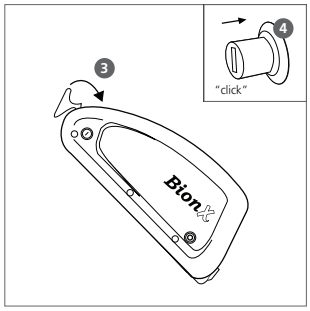
Inserting or Removing the Battery

Inserting the down tube battery

1. Place the battery onto the docking station
2. Slide the battery down the rail gently towards the connector
3. The release arm will begin to move to the closed position as the battery slides towards the connector
4. When the release arm is almost closed, hold it in place and simultaneously push in the lock cylinder – you will hear a "click" when the lock cylinder is properly closed

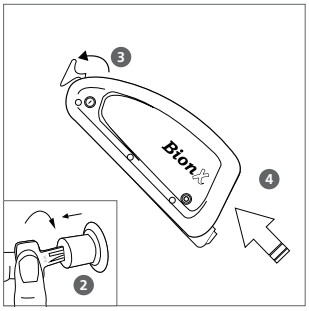


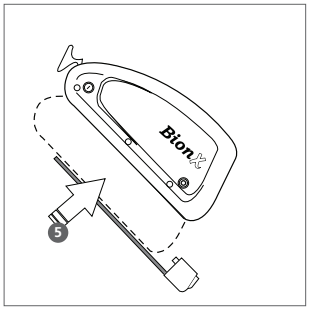




Removing the down tube battery

1. Turn off the BionX propulsion system via the console (no illustration)
2. Lightly press on the battery release arm, insert the key and turn clockwise
   The lock cylinder will pop out, freeing the battery release arm
3. Remove the battery by opening the release arm
4. Slide the battery upwards on the rail
5. Lift the battery to remove



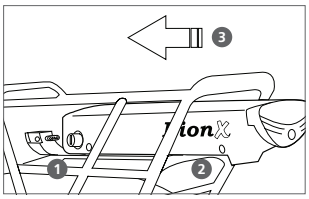


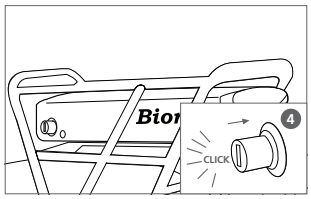
WARNING

Do not force the battery release arm closed, or force the battery onto the battery dock. This can damage the battery connector.

Inserting the rear rack battery:

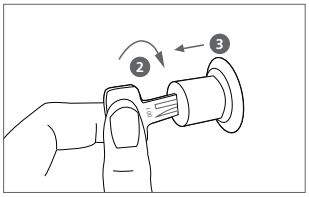
1. Open the lock cylinder: please ensure that the key is removed from the lock cylinder
2. Place the battery onto the battery docking station
3. Gently push the battery in a forward direction, towards the battery connector
   Make sure the battery is inserted all the way, flush with the docking station cover
4. Push in the lock cylinder until a 'click' is heard

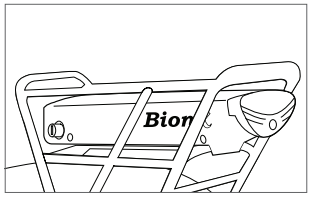


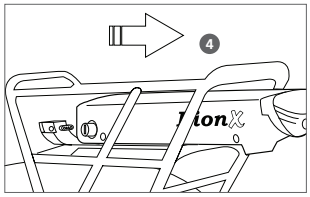


Removing of the rear rack battery:

1. Turn off the system via the console (no illustration)
2. Turn the key in the lock cylinder until it pops out
3. Remove the key from the lock cylinder
4. Pull the battery backwards, along the battery rail







WARNING
Do not force the battery onto the battery docking station. This can damage the battery connector, or damage the rear light.

Handling and Charging the Battery

WARNING
BionX batteries shall only be recharged with BionX chargers or BionX power supplies. Never short circuit the battery by connecting the contacts of the battery. Never open the battery, as this could damage the battery and possibly lead to overheating. The battery cannot be serviced by the user. Opening the battery case voids all warranty and product liability claims. Never use a battery which has obvious damage to the case(s) or the battery connector.

Make sure that the battery is no longer connected to the power supply or charger once the charging operation is complete. The Lithium Ion battery cells have a low self-discharge rate, therefore a continuous connection of the battery to the power supply or charger is not necessary. We recommend that you fully charge the battery when it will not be used for a longer period of time, for example, before storing it for the winter, and then recharge the battery at minimum every three months.
It is best to store the battery in a cool location at temperatures between 10 °C (50 °F) and 25 °C (77 °F). Never store the battery in locations where the temperatures can reach more than 45 °C (113° F) or fall below -10 °C (14 °F). The battery should never be exposed to extreme temperature fluctuations or humidity, and always protect the battery during storage from humidity to prevent corrosion of the connectors. Never drop the battery. Always protect it from physical damage. Damage may lead to short-circuits, and as a result cause overheating of the battery.

Do not dispose of used batteries in regular household trash!
Be aware that used batteries must be disposed of properly!
BionX batteries can be returned to BionX to be recycled.

Charging the battery:

WARNING

Only use the BionX power supply or charger that was supplied with the system to charge the battery. The use of other power supplies/chargers can damage the battery.

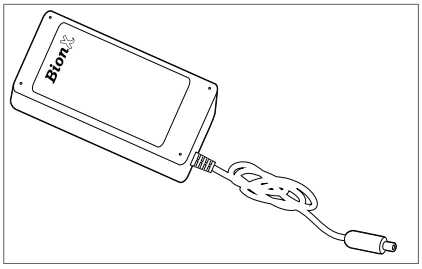
The BionX power supply/charger should be used exclusively for BionX rechargeable batteries of the specified type. Keep the power supply or charger away from water or moisture when charging and/or connected to prevent electrical shock or short-circuits.

Do not use a power supply or charger that has obvious signs of damage to the cable, housing, or the connector.

Extreme temperatures will affect battery life, especially during charging. Avoid charging in direct sunlight or in very hot or cold temperatures. This will reduce the life of the battery considerably. We recommend charging the battery at room temperature (approximately 20 °C / 68 °F). The battery should be warmed to room temperature before it is charged, particularly if it was exposed to cold temperatures during a ride.

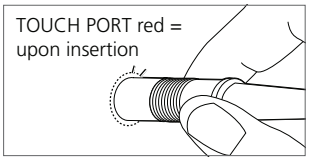
The battery can be charged when mounted on the bicycle or removed from the docking station.
A Lithium Ion battery does not have a memory effect, which means that the battery's maximum energy capacity is not affected if it is repeatedly recharged after only being partially discharged. The battery does not need to be completely drained before charging. We recommend charging the battery after every ride, preferrably when the state-of-charge display shows less than 50%. **We recommend that you fully charge the battery when it will not be used for a longer period of time, for example, before storing it for the winter, and then recharge the battery at minimum every three months.** When the battery is depleted to the level where there is risk it could fall into deep discharge, the battery will signal that a recharge is needed by beeping. The battery is fully charged after approximately 4 to 5.5 hours.

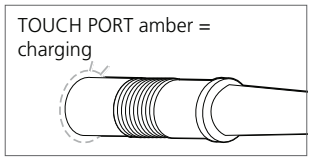
Power supply

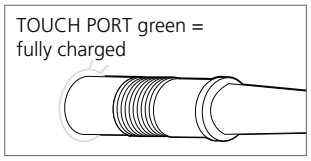


SL system charging procedure (power supply)

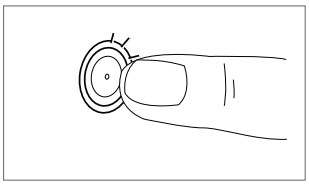
- Connect the power supply and the battery by inserting the charge connector into the TOUCH PORT – the BionX system can be on or off
- Connect the power supply to a power receptacle
- The battery TOUCH PORT (LED ring around the charge connector) lights up red upon insertion and then turns to amber during the charging process
- When fully charged, the colour of the LED ring changes to green. The battery charging process is then complete
- Following this procedure the charging connector should be disconnected from the battery
- During the charging process you can check the battery state-of-charge through the console if the battery is connected to the system – a 48V system can be switched on while it is charging







Ensure that a completely charged battery is no longer connected to the power supply after the charge procedure is completed.



Battery state-of-charge	Colour
100-75 %	Green
75-20 %	Amber
< 20 %	Red

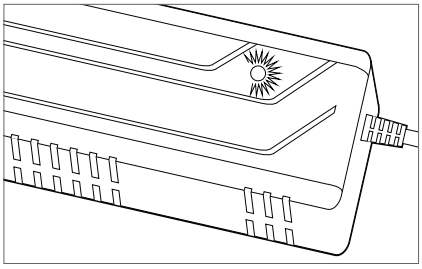
Checking the 48V Battery state-of-charge

- Swipe your finger slowly over the TOUCH PORT
- Battery state-of-charge LED will illuminate
- Allow ten (10) seconds before checking state-of-charge again

NOTE

The power supply is suitable for line voltage ranges of 110-115V or 220-230V, and compensates automatically. The 48V battery is designed to be charged by a 26V BionX power supply. The battery has an integrated charger which permits the use of a small, portable power supply.

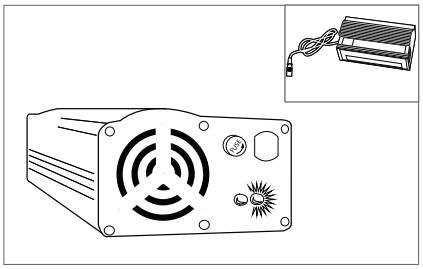
Chargers

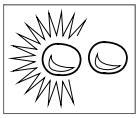


PL-250HT / PL-350HT / PL-500HS systems charging procedure, systems 2011 to present (single LED charger)

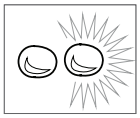
- Connect the charger and battery by inserting the charge connector into the charge port. The BionX system should be turned off
- Connect the charger to a power receptacle
- The light on the charger will turn red automatically
- The same light will then turn yellow to indicate charging
- The light will turn green when the battery is fully charged and the charging process is complete
- Following this procedure, the charger should be disconnected from the battery

NOTE
The 37V single LED charger is suitable for line voltage ranges of 110-115V or 220-230V, and compensates automatically.

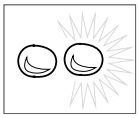




Left LED =
red, charger on



Right LED =
yellow, charging

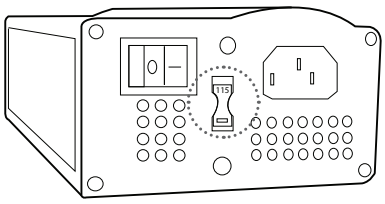


Right LED =
green, fully charged

PL systems 22V, 26V, 37V charging procedure, systems 2011 and earlier (two LED charger)

- Connect the charger and battery by inserting the charge connector into the charge port. The BionX system should be turned off
- Connect the charger to a power receptacle
- The power switch must be set to 'on' and the red LED will illuminate
- The LED to the right of the red LED will illuminate yellow to indicate charging
- When the right LED turns green the battery is fully charged and the charging process is complete
- Following this procedure, the charger should be disconnected from the battery

WARNING
Check input voltage when travelling with the two LED charger. Failure to adjust the voltage switch on a two LED charger to the correct voltage range can result in damage to the charger.



Assist Mode / Generate Mode / Mountain Mode (where applicable)

The BionX propulsion system offers four levels of assist in the Assistance mode, and four levels of regeneration in the Generate mode. In the Assistance mode, your pedaling is assisted proportionally by an electric motor that drives the rear wheel. A torque sensor is located on the axle of the BionX motor and measures the effort provided by the rider; this produces a natural feeling assistance from the motor. A cadence of roughly 80 RPM is ideal, this allows for effective response from the torque sensor and efficient use of battery energy.

When in Generate mode, the BionX motor functions as a generator and recharges the battery. When going downhill, you can regulate your speed by varying the Generate level. This Generate function provides a level of braking, however it does not replace legally required brakes. If the rear brake lever is pulled, the drive system automatically enters Generate mode. The range can therefore be extended up to 15%, depending upon road conditions.

The Mountain mode uses an intelligent algorithm based upon the effort and the assistance level required. The Mountain mode provides the rider with an assistance level optimized for climbing long steep hills. Without this mode, the motor can automatically revert to an overheat protection mode thereby diminishing the assistance provided. The Mountain mode can be activated (where available) by your dealer through a software update of the system.

250HT (EU) / 350HT (NA) Motor performance		
Assistance Mode (A)	**Level of Assist**	**Riding Situation**
1	35%	Riding on level ground
2	75%	Slight inclines, head wind
3	150%	Steep hills, strong head wind
4	300%	Very steep roads
250/500 Motor performance		
Assistance Mode (A)	**Level of Assist**	**Riding Situation**
1	25%	Riding on level ground
2	50%	Slight inclines, head wind
3	100%	Steep hills, strong head wind
4	200%	Very steep roads

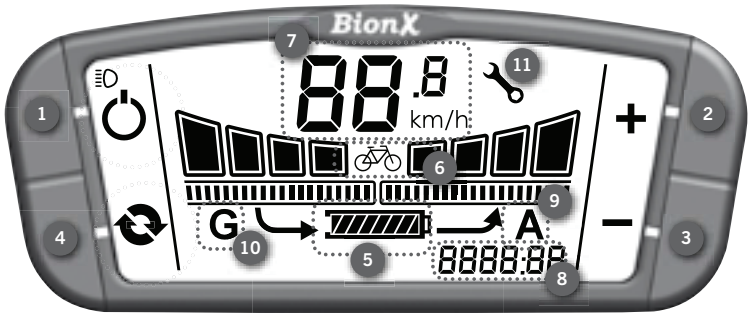
Mountain Mode (where available)	Long, steep climbs

Generation Mode (G)	
1	Slight downhill grade, tailwind
2	Significant downhill grade, tailwind
3	Steep descent
4	Very steep descent

NOTE
It is recommended that the BionX system should always be turned ON while riding. It allows the rider to use the regenerative braking feature, speedometer and odometer functions. Speeds in excess of 60km/h (37mi/hr) are not recommended.

Operating the BionX Propulsion System

G2 Console

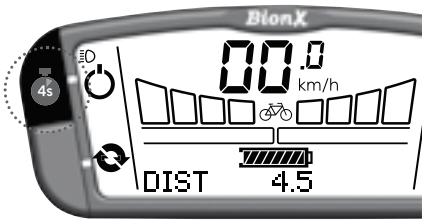


1. Power
2. ⊕ Key
3. ⊖ Key
4. Cycle
5. State-of-charge indicator
6. (bicycle) mode
7. Speedometer
8. Trip distance/average speed/ chronometer/odometer/clock
9. Assist level (A)
10. Generate level (G)
11. Wrench symbol

Turn the system on
Briefly push either top button on the console. The battery will beep 4 times and you will see a countdown, this is the system perfoming a self check. After startup, the system is always in mode (no motor assist/ bike operation). To turn the system off, briefly push . The battery will beep 5 times. After 5 minutes of "no operation" the system turns off automatically.

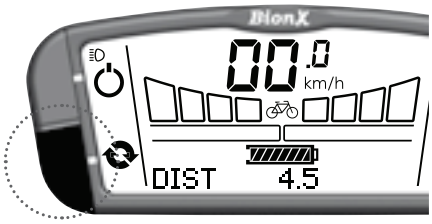
NOTE
The system performs a self check approximately every hour. Do not be alarmed if the system turns itself on briefly, and off again, or if the TOUCH PORT flashes momentarily.

Select Assistance/Generate level
Push ⊕/⊖ key for more/less assist (see bar "fields 1-4" above display "A"). From mode push ⊖ key to enter continuous Generate mode.



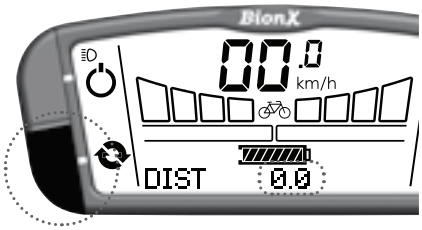
Turn on backlight and bicycle light (if applicable)
Push and hold ⏻ key for 4 seconds - display backlight and bicycle light (if available, battery integrated) are turned on.

Turn off backlight
Push and hold ⏻ key again for 4 seconds.



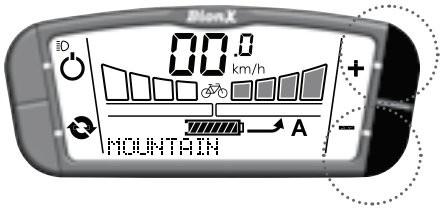
Select the cycling computer functions
Briefly push the 🔄 key to change between:

Trip Distance	DIST
Odometer	ODO
Clock	CLOCK
Average Speed	AVSPD
Chronometer	CHRONO



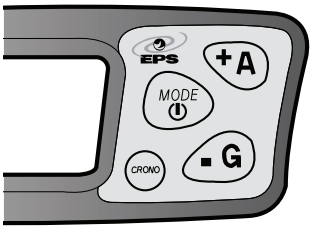
To reset the cycle computer functions
Hold the 🔄 key for a few seconds to reset the distance, chronometer, or average speed values to zero.

WARNING
If this symbol 🔧 appears please contact your BionX dealer for service.



Mountain Mode (where available)
Hold the ⊕ button from any level of (A) or (G) to engage. The four assist levels will flash, MOUNTAIN will appear briefly. Press ⊖ to disengage.

G1 Console



For the G1 console, substitute mode for power, and crono for cycle. The assistance toggle remains the same.

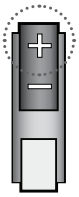
G1	G2	
MODE	⏻	Mode/Power becomes Power
CRONO	🔄	Crono becomes Cycle
+A	⊕	Remains the same
-G	⊖	Remains the same

If you require more information on the G1 console, please contact your dealer.

Operating the G2 throttle

Throttle engagement:
Default min. 3km/h to engage throttle

Note: throttle control is variable, and the force gauge on the console reacts proportionally



Assistance levels 1-4:
From 🚲 press ⊕ for more assist
or ⊖ for less assist

Generation 1-4:
From 🚲 press ⊖ for more resistance
or ⊕ for less resistance

NOTE
The G2 throttle is only compatible with the G2 console, and may not be available in all jurisdictions. Check with your local BionX dealer for local legislation and/or availability.

Programming the Basic Settings

In general, all settings of your BionX electric propulsion system are pre-set. Basic display functions can be set by entering the programming mode. Contact your dealer to customize the advanced functions of your system.

Turn on the programming mode
Simultaneously push ⏻ and 🔄 until the display shows "0000". The first zero blinks. Change the value of the selection with ⊕ or ⊖ and confirm with ⏻. Select the other digits in the same manner until the desired program is displayed.

Note: For G1 programming, substitute MODE (mode) and CRONO (crono) for ⏻ (power) and 🔄 (cycle) respectively, ⊕ and ⊖ remain the same.

Code	Description
2001	Select km/h or mph
2002	Regeneration/brake output (for reed switch) 0-40 (ideally 30-40)
2004	Clock adjust
2005	Tire circumference (millimeters)
2009	Flip Display: 0 = power left, 1 = power right (G2 only)

Code 2001	Code 2002	Code 2004
Select unit - km/h or mph. Select with ⊕ or ⊖, and confirm with ⏻.	Default value: 30. Change with ⊕ and ⊖. Confirm with ⏻.	Select hour/minutes with 🔄, change value with ⊕ and ⊖. Confirm with ⏻.

Code 2005	Code 2009
Set tire size (in mm) - Select digits one after another with ⊕ or ⊖, and confirm with ⏻.	Current setting of main functions is displayed. Flip = 0, assist toggle is on the right side of console; Flip = 1, assist toggle is on the left side of console. Confirm with ⏻.

WARNING
Do not use other programming codes without consulting your authorized dealer.
If you type the wrong code, please push the ⏻ key to exit programming mode.

Removing and Installing the Rear Wheel

We recommend the removal and installation of the rear wheel to be done by a qualified dealer. Should you have to do this yourself, please follow the instructions below:

WARNING

Always turn off the propulsion system prior to connecting or disconnecting the motor cables.

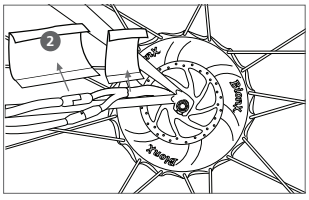
CAUTION

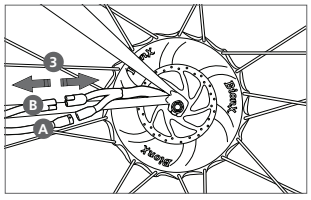
It is essential that the axle nuts are tightened to 40Nm (30lb-ft); this assures that the propulsion system functions properly. Ensure the torque reaction collar is fully inserted into the dropout. The notch on the non-drive side must also be facing in the direction of 6 o'clock (within 5° either way). If this notch placement is incorrect, please consult your dealer.

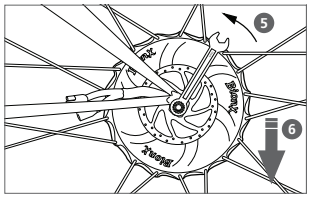
If your bike is equipped with hydraulic disc brakes: Do not pull the brake lever with the brake disc on the rear wheel removed from the caliper. Insertion of the wheel can be difficult or impossible as the brake pads will prevent the brake disc from sliding in place.

To Remove the rear wheel

1. Make sure that the system is turned off via the console (no illustration)
2. Remove the neoprene covers (if applicable)
3. Disconnect the two cable connections that lead to the motor (COMMUNICATION A, before POWER B)
4. Disconnect the cable guide from the rear wheel brake (only on bicycles with rim brakes, not shown)
5. Loosen the axle nut on the rear wheel using a 15mm wrench
6. Slide the rear wheel downwards, out of the dropout

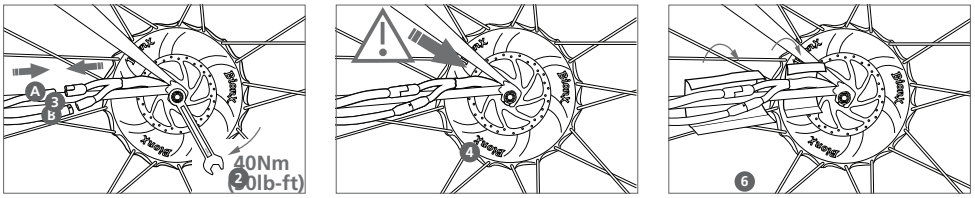






Installing the rear wheel

1. Guide the rear wheel axle into the dropouts and ensure that the brake disc (on models with disc brakes) is inserted between the brake pads. Ensure that the torque reaction collar is aligned so that it fits into the left dropout (no illustration). Make sure the axle is inserted all the way into the dropouts
2. Tighten the axle nuts to 40Nm (30lb-ft) (= VERY TIGHT!). This torque is essential for the correct function of the propulsion system. If you do not have a torque wrench, use a normal wrench, and then have your dealer check the torque of the axle nuts as soon as possible. Use only the original axle nuts; otherwise you run the risk of damaging the axle threads
3. Connect the cables (POWER A before COMMUNICATION B)
4. Keep the motor cables clear of the brake disc (on models with disc brakes) and the motor casing
5. Re-install the cable of the rear wheel brake (rim brakes only), and correctly adjust the rear wheel brake (no illustration)
6. Place the larger neoprene cover over the plug-in connections, and the smaller neoprene cover closer to the disc/motor to prevent the cables from contacting any moving portions of the motor



Maintenance and Care

We recommend to have the spoke tension of the rear wheel and the torque of all screws checked by a qualified dealer after the first 200km (125 miles).

In order to ensure extended use of the propulsion system, all plug-in contacts of the system should be checked every two to three months and cleaned with a soft and dry brush, if necessary. It must be ensured that no dirt or humidity penetrates the battery docking station when the battery is removed. The BionX motor does not require maintenance.

Cleaning

CAUTION
Never use a high pressure washer or a garden hose to clean the propulsion system. The force of a water jet could damage the electrical components of the propulsion system.

We recommend a soft sponge or a soft brush to clean the bicycle. Use a moist rag to clean the battery docking station. Always use very little water, and keep water away from the electrical contacts. Check the plug-in connections for moisture after cleaning and let these dry, if necessary, before using the bicycle.

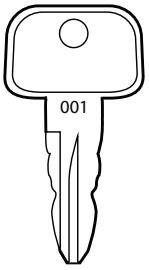
Transporting an Electric Bicycle

WARNING
Make absolutely certain that the bike rack on your car is suitable for the increased weight and the unique frame style of your electric bicycle. A rack that is not suitable can be damaged or even break during the transport of the electric bicycle. The electric bicycle can be damaged by an unsuitable bike rack.

When transporting a BionX equipped bicycle on a bike rack, always remove the battery and the console. In case of inclement weather, your motor and system connections should be protected from the elements. When travelling by air, it is important to understand that a lithium battery is classified as dangerous goods and must be transported by a qualified handler. Your battery cannot accompany you and your bicycle on a commercial flight.

Repair and Spare Parts

For repair of your electric bicycle, consult a qualified dealer. The use of spare parts from unknown sources, for example, replacement parts from third parties, is strictly prohibited. If you need spare keys for the battery, please contact a BionX dealer. Please retain the key number for your records. It is located on the battery key, as well as on the face of the battery lock cylinder.



BionX Key Number

NOTE
If you are dropping off your bicycle for a tune up or repair, always bring your battery keys to the dealer.

Troubleshooting

The system does not turn on
Check the battery and make sure that it is charged. The battery must be correctly inserted onto the docking station and the lock must be completely closed. Also check that all connectors of the wiring harness are properly engaged, and the console is inserted properly. If the problem persists, contact an authorized dealer.

The system can be turned on but there is no assist
Check that the cables running from the battery to the motor are properly connected (with the system turned off). Turn the system on. If the problem persists, contact an authorized dealer.

The system is continuously in Generate mode
When the propulsion system is continuously in Generate mode and cannot be switched back to assist mode by pushing the ⊕ key, the problem most likely lies with the brake switch that is located under the brake lever. In this case try to "repair" the system by turning it off and then on again. If that does not solve the problem, you can temporarily bypass it by removing the plug-in connection from the console to the brake switch.

WARNING

If you bypass the brake switch you also disable regenerative braking, in doing so your BionX system will not provide any additional braking. We recommend that you contact a dealer as soon as possible.

The motor is not as powerful after a repair or service
Tighten the nuts of the rear axle to the specified torque (40Nm/30lb-ft); check that the axle slot is facing in the direction of 6 o'clock. If the problem persists, contact an authorized dealer.

The battery state-of-charge display on the console does not show "full" after a complete charging procedure
Make sure that you have followed all of the instructions for the charging procedure. Let the battery cool off for a few hours and charge it again. If the gauge still does not indicate a full charge, let the battery cool again, fully deplete the battery and charge it again. If the problem persists, contact an authorized dealer.

Warranty Information and Guarantee

The BionX warranty covers a two (2) year period for all parts of the BionX propulsion systems(s) to the first owner, within the framework of the following conditions:

1. This warranty exclusively covers systems provided by BionX excluding all the other bicycle components provided by other bicycle manufacturers.

2. This warranty covers the repair and/or the replacement of BionX propulsion systems provided that the equipment concerned loses its functionality within the agreed warranty period and also provided that the claim is not related to any of the following cases expressly excluded under this warranty.

3. Any other legal provisions, particularly with respect to warranty regulations, are not restricted by this warranty.

4. This warranty only covers material and manufacturing defects. It is only effective with a valid proof of purchase consisting of the original purchase document or receipt indicating the date of purchase, the serial number, the dealer's name and the designation of the system model. BionX reserves the right to reject the coverage of this warranty if the accompanying documentation of BionX components is not accurate or complete.

5. In the case of a warranty claim, BionX undertakes to either repair faulty system components and/or to replace such components, at BionX discretion (Service Replacement Unit).

6. Warranty repairs have to be exclusively performed by BionX. Any component to be repaired under the framework of this warranty has to be transferred to the dealer at the client's own expenses and risks, and, after the completion of such repair, has to be picked up at the dealer. In the case of rightful warranty claims, BionX reserves the right to bear or repay transportation expenses. In order to have a previous determination whether a warranty claim is justified or not, the end user has to submit his claim to the dealer from whom he purchased the product so that the respective dealer handles the shipment to BionX.

7. Costs for repair work performed in advance by persons who have not been authorized by BionX will not be reimbursed. In such a case, any warranty claim will cease.

8. Repair work and/or replacement of components during the warranty period does not lead to an extension and/or a new start of the warranty period. Repair work and direct replacement during the warranty period may be performed with functional replacement components of equal value.

9. The two-year warranty period starts with the date of purchase. Warranty claims must be reported immediately.

10. If the battery/cell pack does not provide full capacity in the course of normal use or for batteries going through a normal aging process or reduction of performance, BionX warranty only covers that within the two-year warranty period or within 600 charging cycles, whichever event occurs first, to the condition that the battery provides less than 70% of its initial capacity.

11. No warranty claims are accepted – without limitation to other reasons – in the case of damages due to the following:
   a) External influences, particularly falling rocks, collision, accident and other external events with an immediate external effect due to mechanical powers.
   b) Purposeful and/or malevolent acts, theft and robbery as well as natural hazard events and/or acts of mischief.
   c) Inappropriate use, e.g. the product was exposed to liquids, chemicals of any type and/or extreme temperatures, wetness and humidity and/or if the battery suffers damages due to non-compliance with the special instructions set forth in the chapter "Handling and Charging of the Battery".
   d) Overcharging the battery or not adhering to the instructions of battery handling.

12. No warranty claims are accepted - without limitation to other reasons:
   a) In the case of test, maintenance, repair and replacement work due to normal use.
   b) If the model, serial or product number on BionX product has been changed, deleted, blurred or removed. The seal and/or the serial number decal on the battery housing has been broken or obviously manipulated.
   c) In the case of use of the battery in systems that are not approved for such use with this particular product.
   d) In the case of the operation of the BionX system with batteries other than the batteries designed for the BionX system (refer to user manual).
   e) If one or more than one BionX part has been opened, altered or repainted.

13. This warranty only covers the above mentioned repair work and/or the replacement of defective or compromised components. It excludes any claims as to the reimbursement of property damages, downtimes, expenses for renting or leasing equipment, travel expenses, lost profit or any other claims. BionX liability in connection with this warranty is limited to the respective acquisition value of the product.

14. This warranty only covers original BionX components. The use of spare parts from unknown sources, for example, replacement parts from third parties, is strictly prohibited.

15. Warranty will be voided on any system on which it will be concluded that there has been any case of modification or tampering with firmware.

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01-4646 REVISION A